



T 973

Seven Channel Amplifier

ALIGNMENT PROCEDURE (T973)

A. DC OFFSET VOLTAGE

The DC OFFSET between OFFSET Test Point and AGND must be controlled within 0 \pm 3mV. If it's found to be out of this range, change the TL084BCD to get it meet the requirement.

B. IDLING CURRENT

The idling current at the final stage of the unit should be set to about 40mA \pm 10mA. Adjust RV102 (As marked as "Idling Current ADJ" in the enclosed drawing below) to control the voltage between Idling current Test point 1 and 2 to be 8mV \pm 2mV.

Preheat the unit for 10 to 15 minutes, and then readjust to 8mV \pm 2mV.

(Please note: The idling current must be adjusted when all modules are assembled into the unit.)

C. ISC SENSITIVITY

Adjust Pot RV104 (as marked as "ISC SENS ADJ" in the below drawing) to get the voltage across "ISC SENS TEST POINT" and AGND to be 0mV \pm 10mV.

(Please note that the ISC should be adjusted when all modules are assembled into the unit. It's not possible to get 0V \pm 10mV if the modules are not assembled.

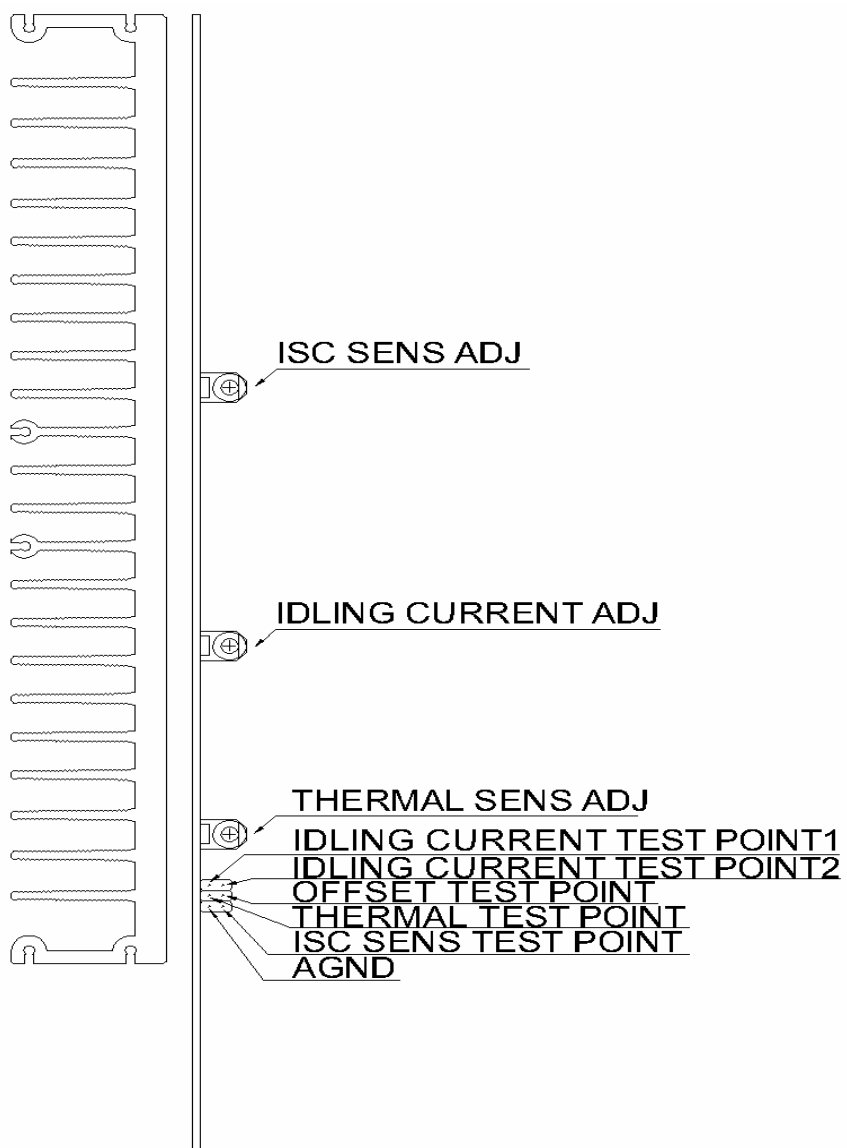
D. THERMAL SENSE ADJUSTMENT

The adjustment should be always done when the T973 is cool condition. (That means the temperature inside the unit should be almost same as the ambient temperature. Connector P208B that connects the transformer and power board should be removed to avoid that the Idling current to heat up the unit excessively)

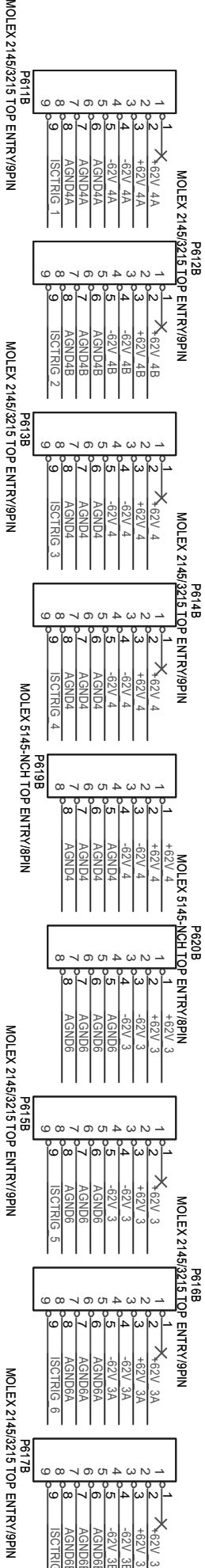
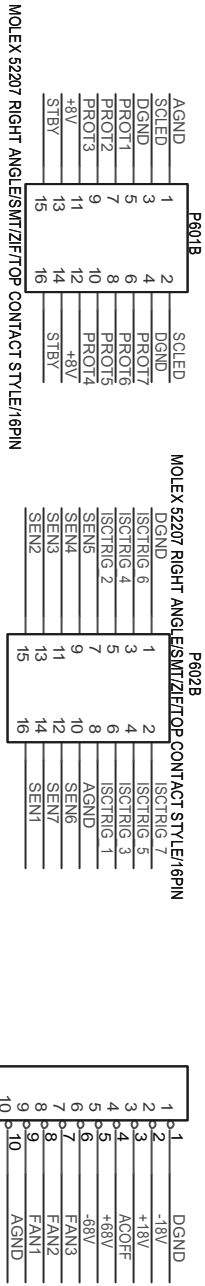
At ambient temperature of 25 C degree and when the unit is just turned on (still in cool condition), adjust the pot RV103 (as marked as "THERMAL SENS ADJ" in the below drawing) to get voltage across the THERMAL TEST POINT and AGND to be 750mV \pm 10mV. While the ambient temperature is different, the voltage will vary as well. There is a relation between the temperature and voltage, that is; if the ambient temperature is 20 degree C, the voltage should be 850mV \pm 10mV; if the ambient temperature is 30 degree C, the voltage should be adjusted to 650mV \pm 10mV, etc.

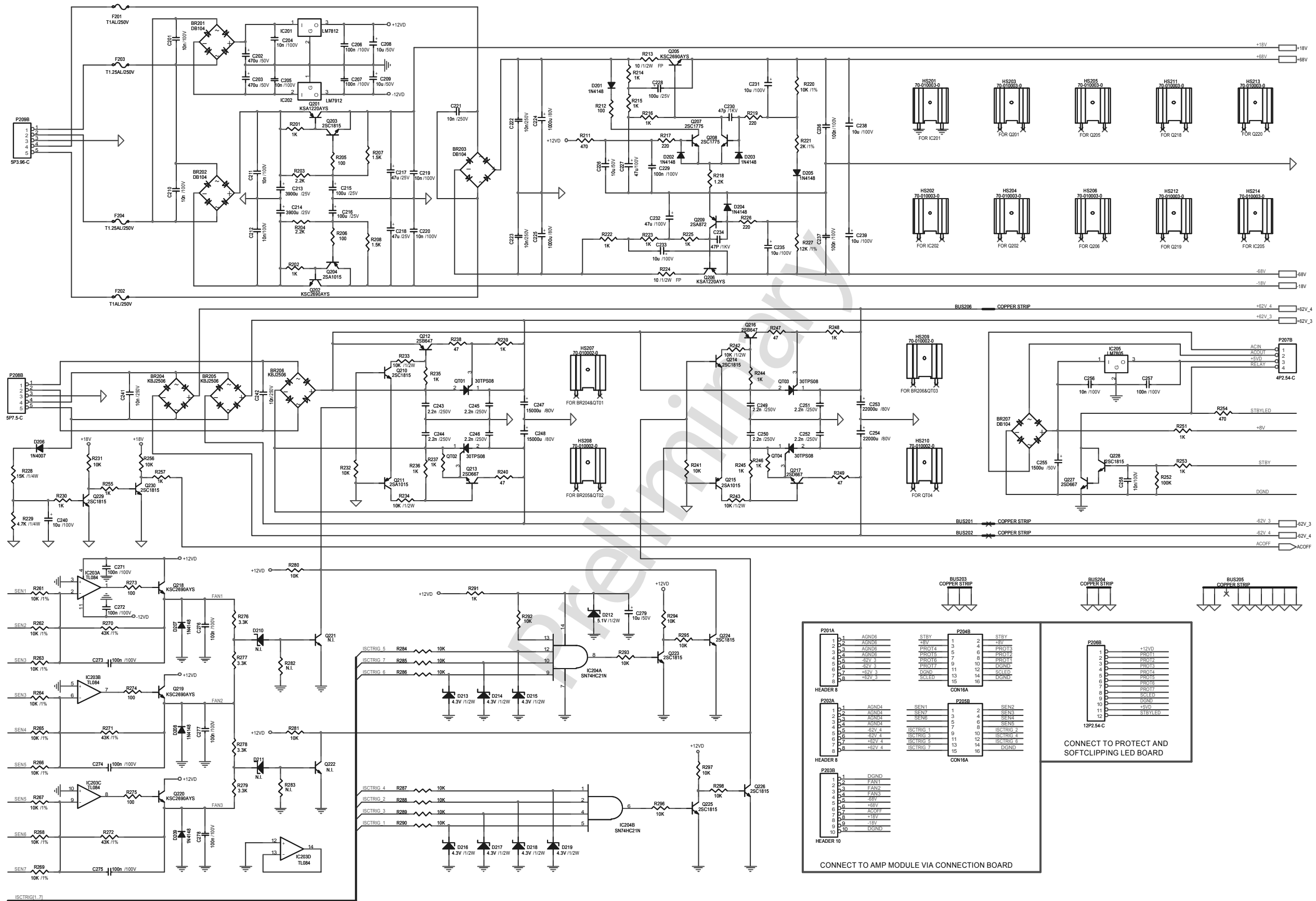
E. Fan Cut Off Point Adjustment

Note: This Fan cut off function does not appear on PCB V10.0, V11.0 or MKII version but only appeared on PCB V12.0. Run the unit for all 7 channels at 1 kHz, 4ohms load, and 250mW output. Do this adjustment when the unit heats up, for example; run the unit at all 7 channels at 50W/4ohms for 10 minutes. Then adjust Pot RV201 on power supply board so the voltage at Pin14 of IC203 just changes from negative to positive (to get the fans just start turning). Then turn off the input signal and monitor if fans will stop within 30 seconds, then turn on the input signal again to see if the fans start turning immediately.

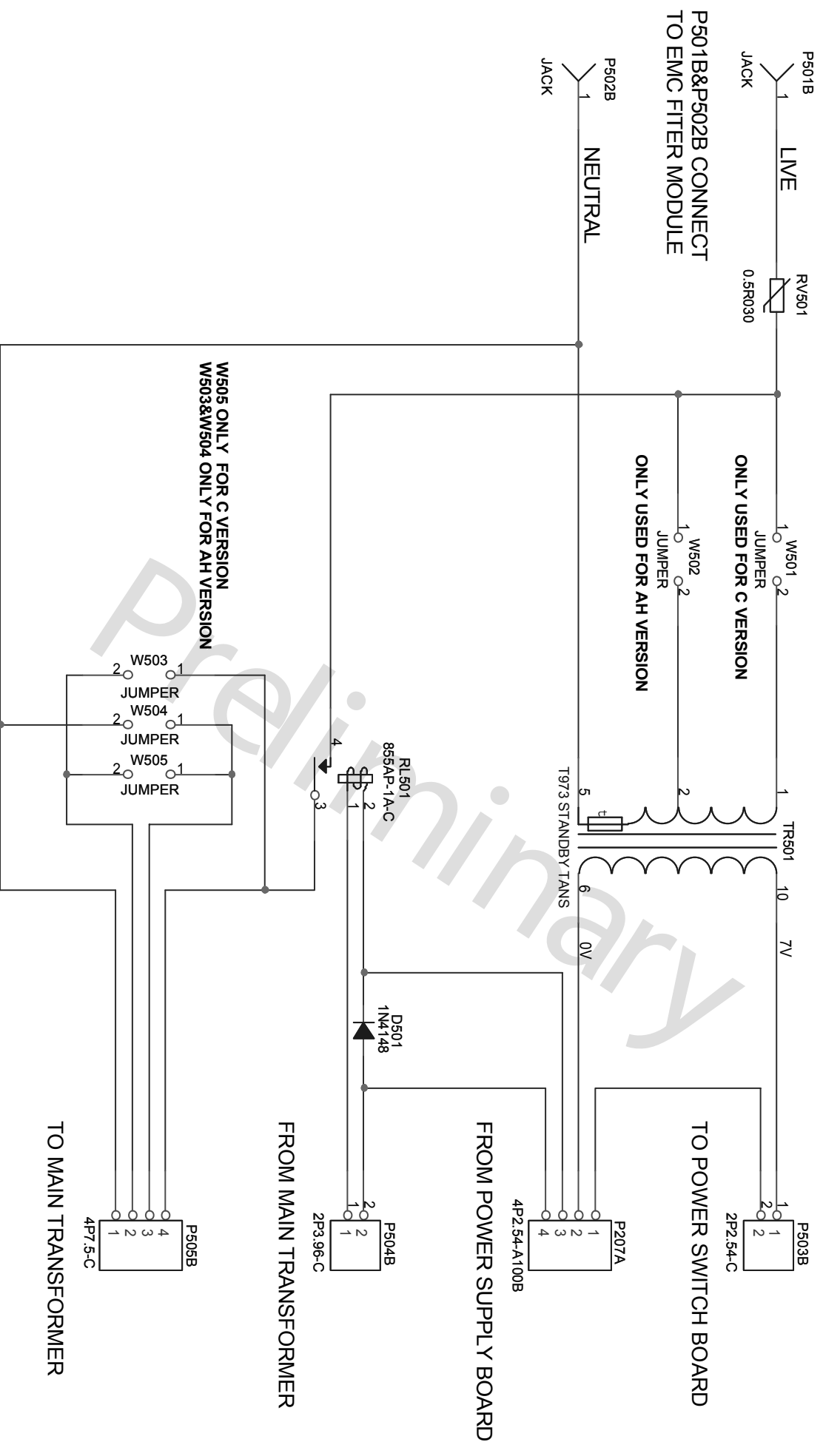


SCHEMATIC DIAGRAM (AMP CONNECTION)

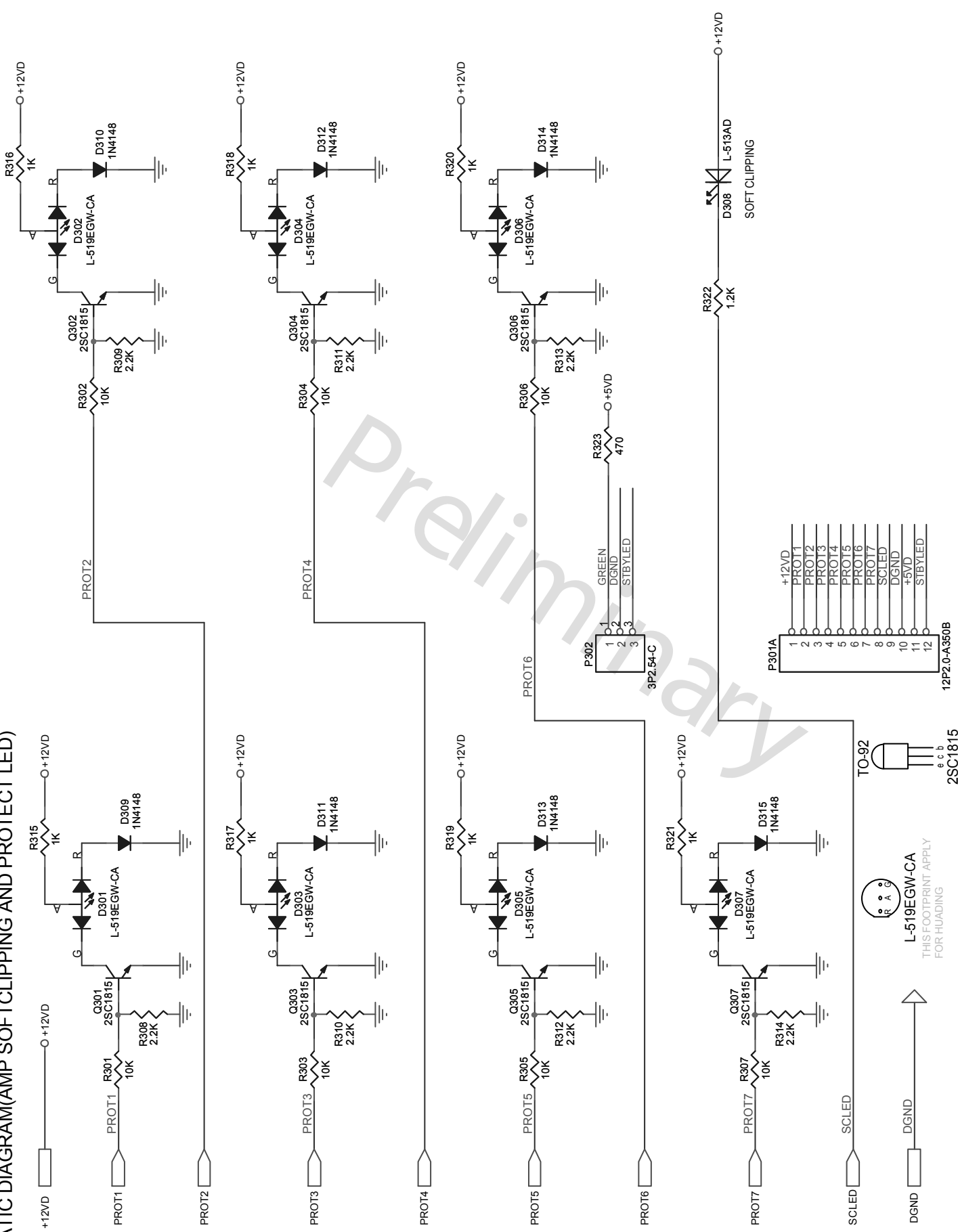




SCHEMATIC DIAGRAM (AMP STANDBY)



SCHEMATIC DIAGRAM(AMP SOFTCLIPPING AND PROTECT LED)



THIS FOOTPRINT APPLY
FOR HUADING

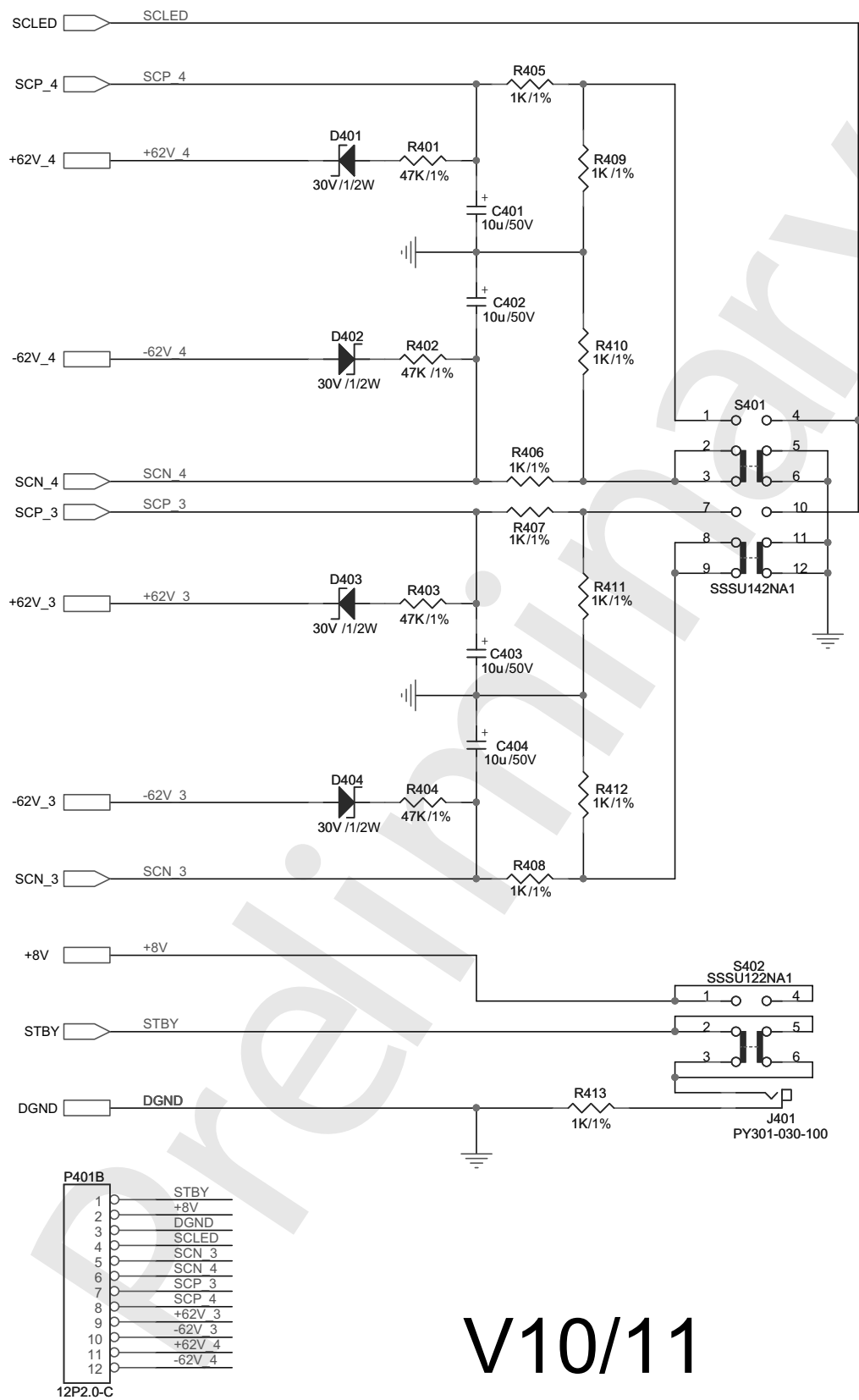


↑
DGND

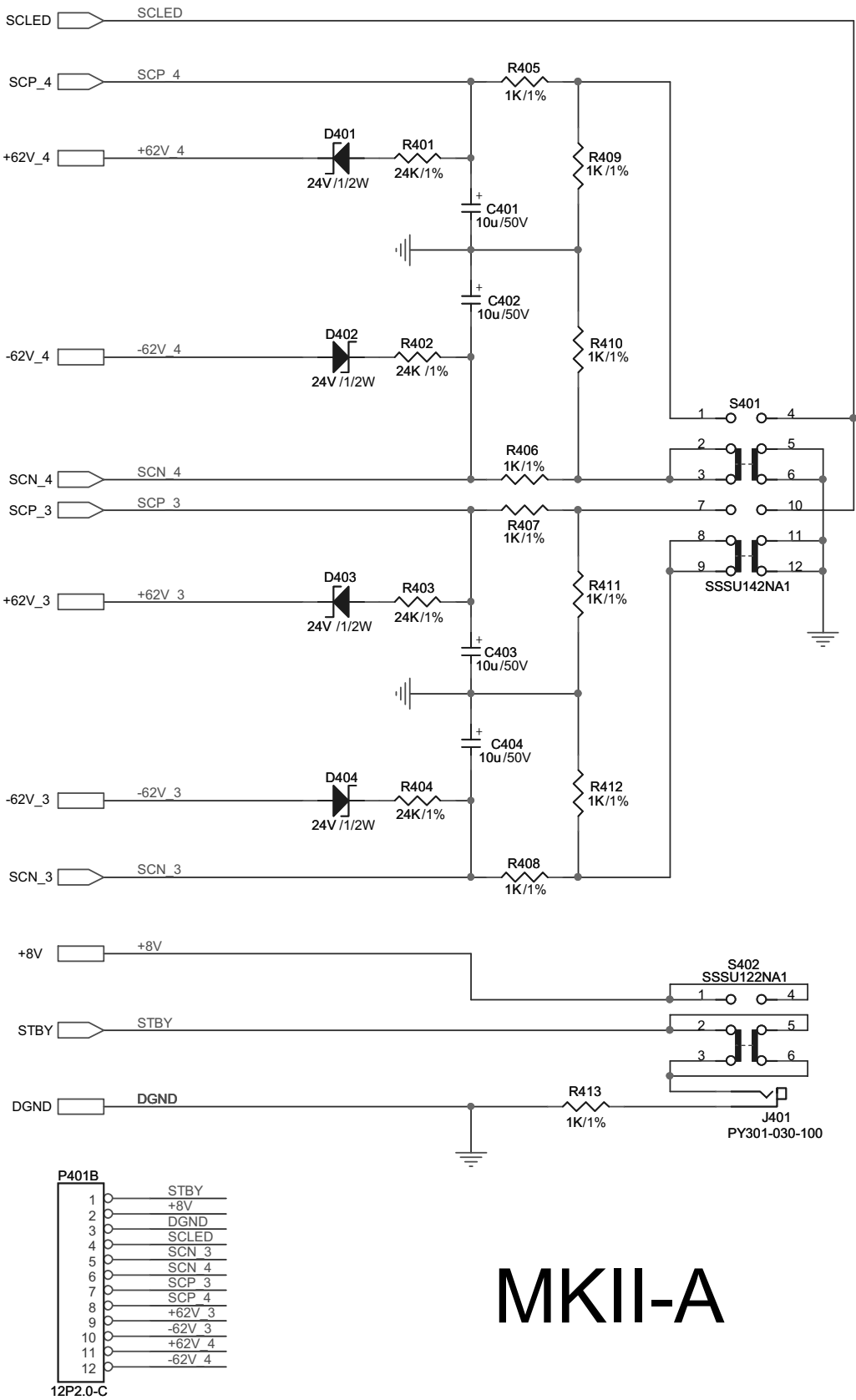
SCLED

TO-92
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SCHEMATIC DIAGRAM (AMP SOFTCLIPPING AND AUTO TRIGGER)

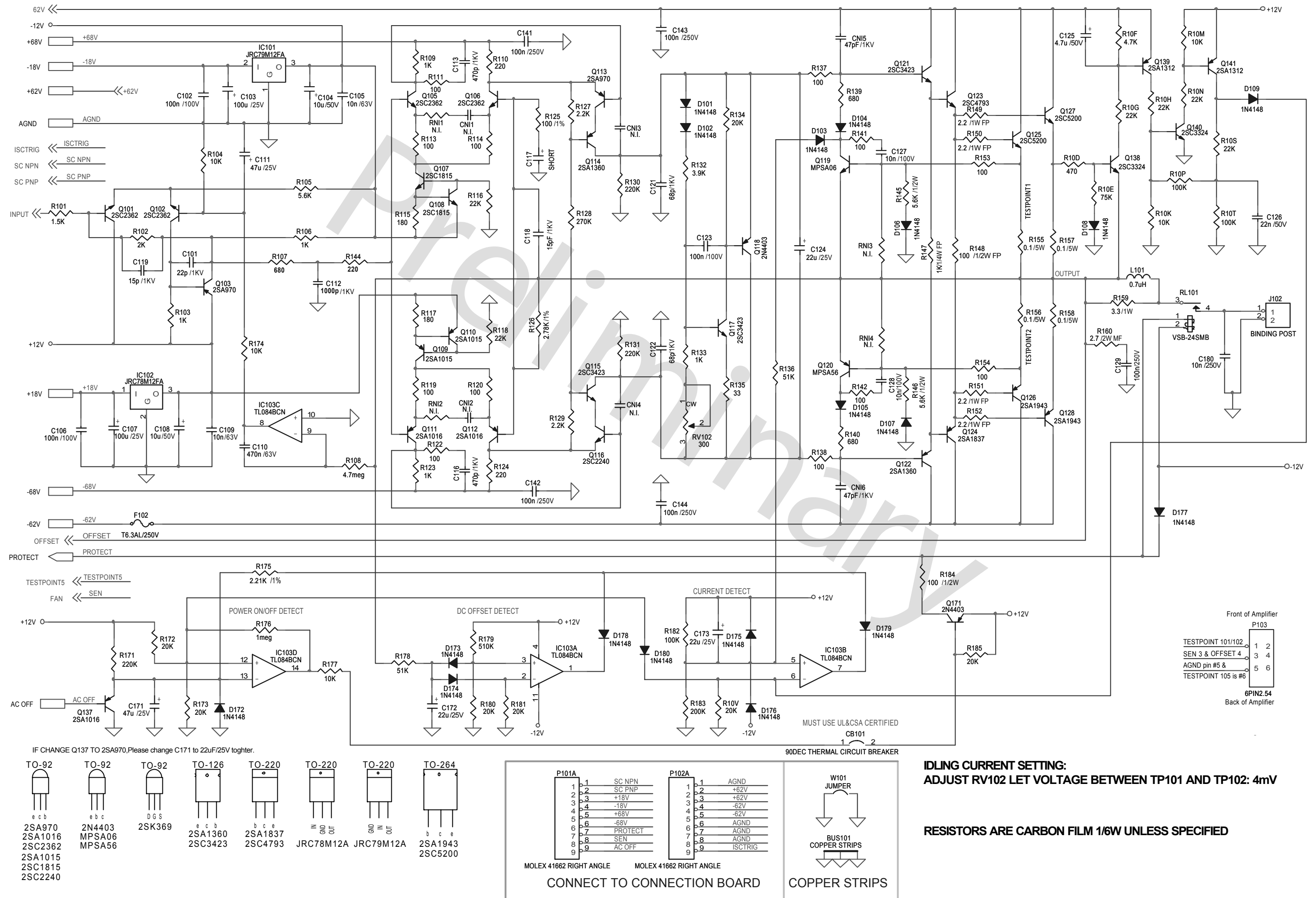


SCHEMATIC DIAGRAM (AMP SOFTCLIPPING AND AUTO TRIGGER)

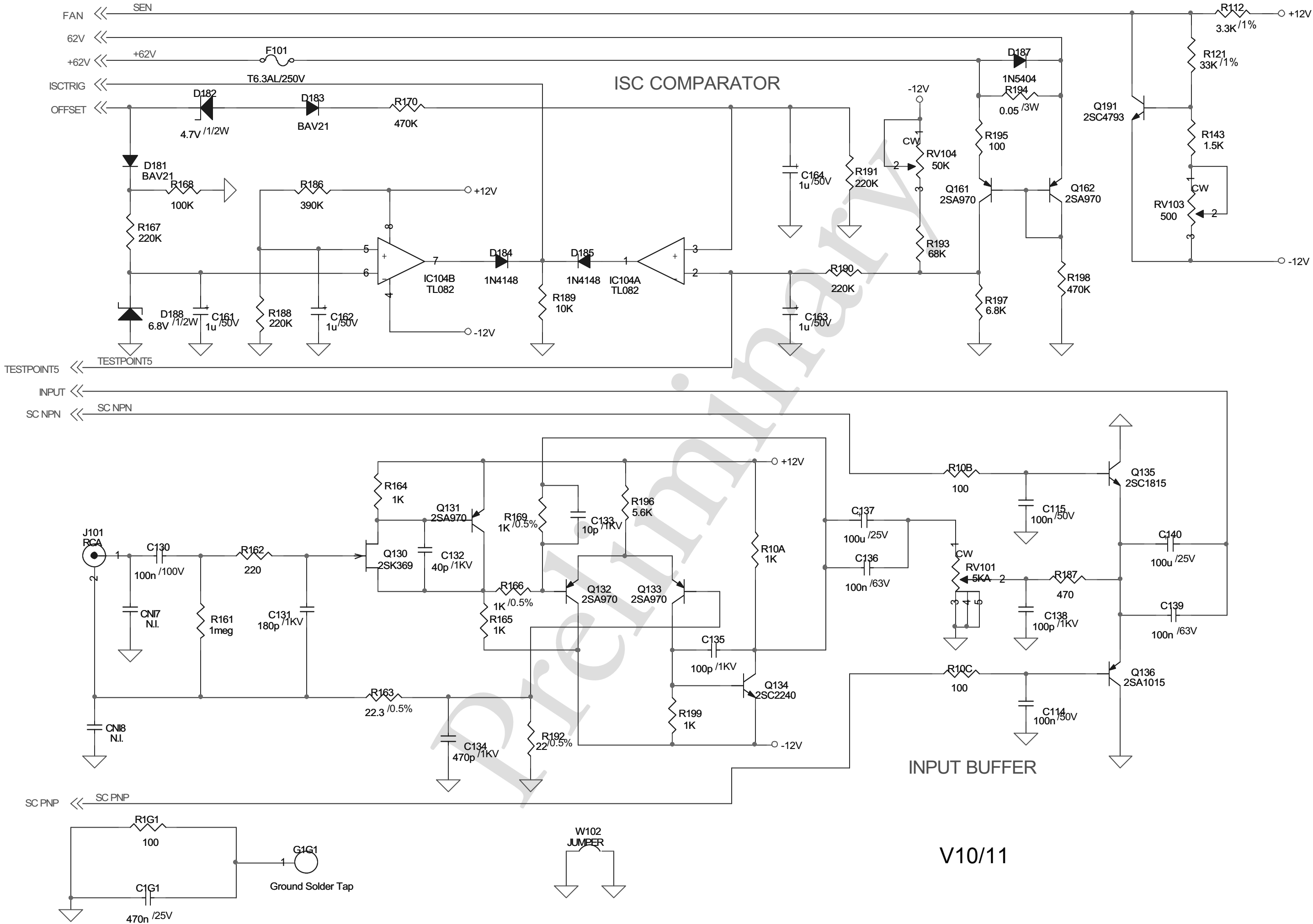


MKII-A

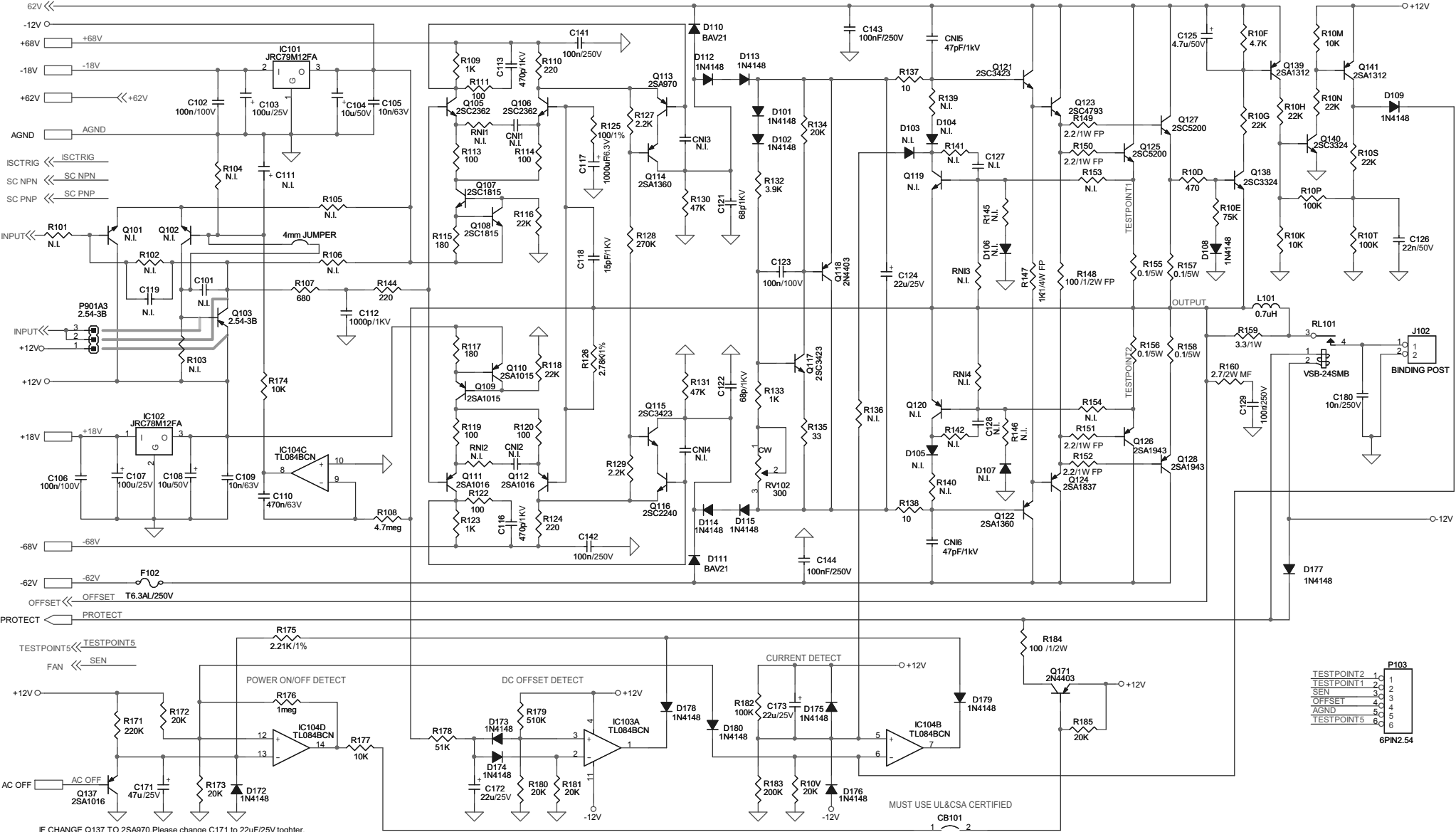
SCHEMATIC DIAGRAM (AMP 1/2)



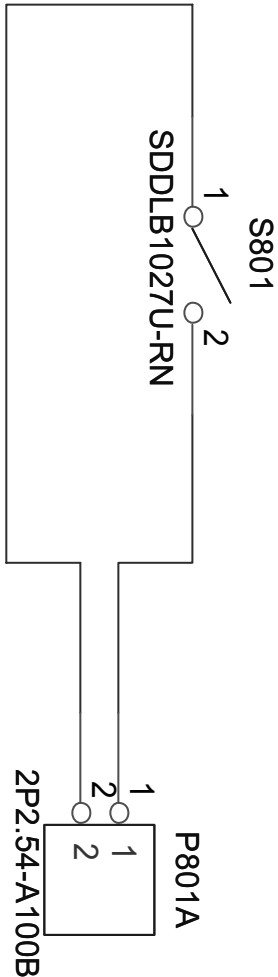
SCHEMATIC DIAGRAM(AMP 2/2)



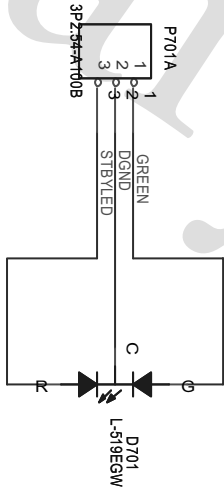
SCHEMATIC DIAGRAM MKII AMPLIFIER & NEW INPUT BUFFER



SCHEMATIC DIAGRAM (AMP POWER SWITCH)

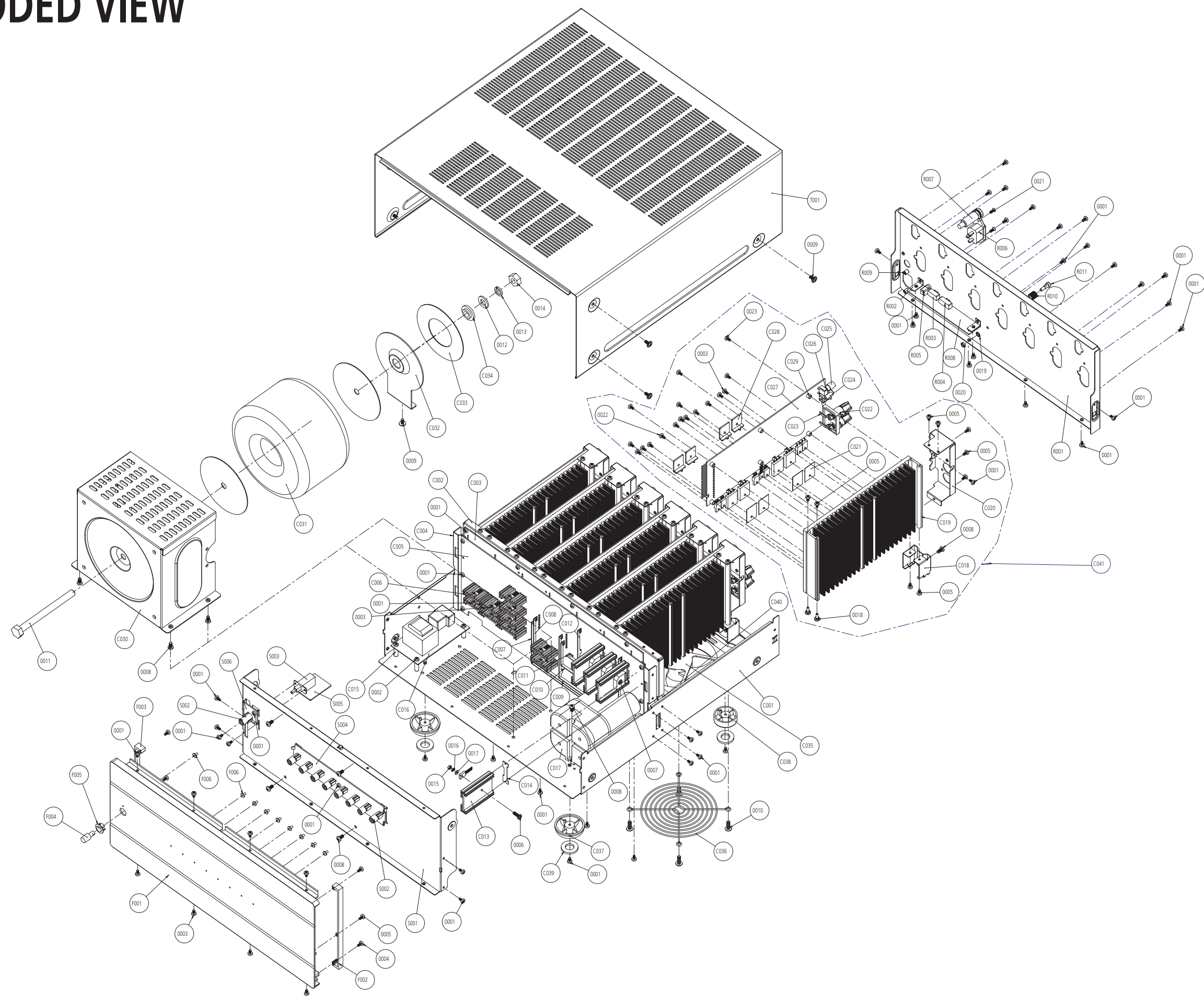


SCHEMATIC DIAGRAM (AMP POWER LED)



L-519EGW
THIS FOOTPRINT APPLY
FOR HUADING

EXPLODED VIEW



EXPLODED VIEW PARTS LIST

| REF.NO | PART NO. | DESCRIPTION | Qty. | REF.NO | PART NO. | DESCRIPTION | Qty. |
|--------|-------------|-------------------------------|------|--------|-------------|--------------------------------------|------|
| C001 | 66-010001-0 | Chassis | 1 | F005 | 77-001007-1 | Power Button Bezel | 1 |
| C002 | 66-010006-0 | Bracket 1 | 1 | F006 | 76-003001-0 | LED Lens | 9 |
| C003 | 01-97306-00 | Assembled Connection PCB | 1 | | | | |
| C004 | 66-010008-0 | Bracket 3 | 2 | T001 | 66-010002-0 | Top Cover | 1 |
| C005 | 01-97302-00 | Assembled PSU PCB | 1 | | | | |
| C006 | 70-010003-0 | Heatsink 3 | 10 | S001 | 66-010003-1 | Subfacia | 1 |
| C007 | 69-010008-0 | Bus Bar 206 | 1 | S002 | 75-005001-0 | LED Sleeve | 9 |
| C008 | 69-010007-0 | Bus Bar 205 | 1 | S003 | 11-01101-20 | Power Switch | 1 |
| C009 | 69-010005-0 | Bus Bar 203 | 1 | S004 | 01-97303-00 | Assembled Protect Softclipping Board | 1 |
| C010 | 69-010006-0 | Bus Bar 204 | 1 | S005 | 01-97308-00 | Assembled Power Switch Board | 1 |
| C011 | 69-006001-0 | Bus Bar 201 | 1 | S006 | 01-97307-00 | Assembled Power LED Board | 1 |
| C012 | 69-010004-0 | Bus Bar 202 | 1 | | | | |
| C013 | 70-010002-0 | Heatsink 2 | 4 | R001 | 67-010001-0 | Rear Panel (C Version) or | 1 |
| C014 | 75-010002-0 | Cushion | 4 | | 67-010006-0 | Rear Panel (AH Version) | 1 |
| C015 | 68-010001-0 | Spacer Support (1) | 5 | R002 | 66-010010-0 | Bracket 6 | 2 |
| C016 | 01-97305-01 | Assembled Standby PCB | 1 | R003 | 11-05202-10 | Switch (S402) | 1 |
| C017 | 75-010001-0 | Capacitor Holder | 1 | R004 | 11-05402-00 | Switch (S401) | 1 |
| C018 | 66-010007-0 | Bracket 2 | 7 | R005 | 17-07001-00 | 12V Trigger In Jack | 1 |
| C019 | 70-010001-1 | Heatsink 1 | 7 | R006 | 17-07003-01 | AC Inlets | 1 |
| C020 | 67-010002-2 | Bracket 4 | 7 | R007 | 20-20000-06 | Fuse Holder | 1 |
| C021 | 78-005005-0 | Insulated Cushion | 4 | R008 | 01-97304-00 | Assembled Trigger PCB | 1 |
| C022 | 71-001001-0 | Binding Post | 7 | R009 | 68-010002-0 | Spacer Support (2) | 2 |
| C023 | 69-010003-0 | Pin | 7 | R010 | 71-003002-0 | Grd. Post Cap | 1 |
| C024 | 17-01001-10 | RCA | 7 | R011 | 71-010001-0 | Grd. Post Bolt | 1 |
| C025 | 73-010001-0 | Rotate Knob | 7 | | | | |
| C026 | 09-01502-00 | Pot | 7 | 0001 | 61-023106-0 | Self Screw STB3X6 | 68 |
| C027 | 01-97301-00 | Assembled AMP Module PCB | 7 | 0002 | 61-023506-0 | Machine Screw MB3X6 | 5 |
| C028 | 66-005009-0 | TR Clamper | 4 | 0003 | 61-023108-0 | Self Screw STB3X8 | 63 |
| C029 | 85-010001-0 | Spacer Support | 42 | 0004 | 61-033106-0 | Self Screw STP3×6 | 4 |
| C030 | 66-010005-0 | Transformer Bracket | 1 | 0005 | 61-023208-0 | Self Screw BTB3X8 | 63 |
| C031 | 18-97132-00 | Transformer (Toroid) or | 1 | 0006 | 61-083512-0 | Machine Screw MPW3X12 | 1 |
| | 18-97132-01 | Transformer (Gloria) | 1 | 0007 | 61-083518-0 | Machine Screw MPW3X18 | 3 |
| C032 | 66-010004-0 | Metal Disc | 1 | 0008 | 61-024108-0 | Self Screw STB4X8 | 10 |
| C033 | 94-010001-0 | Transformer (Toroid) Label or | 1 | 0009 | 61-084108-0 | Self Screw STPW4X8 | 7 |
| | 94-010005-0 | Transformer (Gloria) Label | | 0010 | 61-045215-0 | Self Screw TB5X15 | 12 |
| C034 | 75-010003-0 | Insulated Cell | 1 | 0011 | 64-110110-0 | Bolt M10X110 | 1 |
| C035 | 35-01212-00 | Fan | 3 | 0012 | 63-011020-0 | Washer, GB97.1-85, Φ10 | 1 |
| C036 | 68-010003-0 | Fan Cover | 3 | 0013 | 63-021030-0 | Spring Washer 10 GB93-87 | 1 |
| C037 | 75-010004-1 | Foot (Big) | 2 | 0014 | 62-011002-0 | Nut, M10 GB6170-86 | 1 |
| C038 | 75-001008-0 | Foot (Small) | 2 | 0015 | 62-010302-0 | Nut, M3, GB6170-86 | 4 |
| C039 | 79-008001-0 | Foot Pad | 4 | 0016 | 63-020308-0 | Spring Washer, 3mm | 4 |
| C040 | 66-010009-0 | Bracket 5 | 1 | 0017 | 63-010303-0 | Washer, 3mm | 4 |
| C041 | 01-97301-10 | Assembled AMP Module | 7 | 0018 | 61-013206-0 | Bolt | 14 |
| | | | | 0019 | 63-030410-0 | Serrated Lock Washer | 2 |
| F001 | 67-010003-0 | Fascia | 1 | 0020 | 62-010402-0 | Nut M4 GB6170-86 | 1 |
| F002 | 67-010005-0 | End Cap (R) | 1 | 0021 | 61-063108-0 | STF3X8 | 2 |
| F003 | 67-010004-0 | End Cap (L) | 1 | 0022 | 61-223514-0 | Machine Screw MB3X14 | 28 |
| F004 | 77-009003-1 | Power Button | 1 | 0023 | 61-023215-0 | Self Taping Screw BTB3X15 | 42 |